WHAT IS CLAIMED IS:

1. A manual focus device for a camera, including an aperture stop unit for limiting a light amount of object light from a photographic object by changing an opening size on a lens optical axis, a taking lens system, including a focusing lens for moving on said lens optical axis by manual operation, and for being set in an in-focus position according to an object distance, to condense said object light on a focal plane, a pickup element, disposed on said focal plane, for outputting pickup data by picking up said object, said manual focus device comprising:

an aperture stop shifting mechanism for setting said aperture stop unit at a first light amount gravity center by shifting said aperture stop unit in a first direction on a plane perpendicular to said lens optical axis, for setting said aperture stop unit at a second light amount gravity center by shifting said aperture stop unit in a second direction that is reverse to said first direction, wherein said first and second light amount gravity centers are equidistant from said lens optical axis;

an image memory for storing first and second sample pickup data obtained by picking up said object in said pickup element through said aperture stop unit when said aperture stop unit is set at said first and second light amount gravity centers;

a display panel for displaying a combination of first and second sample images according to said first and second sample pickup data, wherein positions of said first and second sample images, when said focusing lens is set in said in-focus position, coincide with one another, and when said focusing lens is set away from said in-focus position, are offset from one another.

2. A manual focus device as defined in claim 1, wherein said aperture stop shifting mechanism includes:

first and second aperture stop blades, having inner curved edges opposed to each other, for defining an opening inside said inner curved edges; and

first and second blade actuators for moving said first and second aperture stop blades in said first and second directions.

3. A manual focus device as defined in claim 2, wherein each of said first and second blade actuators includes:

a rack formed with one aperture stop blade included in said first and second aperture stop blades;

a pinion meshed with said rack; and

a motor for rotating said pinion in forward and backward directions.

4. A manual focus device as defined in claim 1, wherein a frame of said display panel includes:

first and second split regions substantially adjacent with one another; and

a background region formed on a periphery of said first and second split regions;

said image memory stores data of said first and second sample images obtained by subjecting said first and second sample pickup data to trimming processing according to said first and second split regions;

further comprising a background image memory for storing data of an object image obtained by subjecting said pickup data to trimming processing according to said background region.

5. A manual focus device as defined in claim 4, wherein said first and second directions are horizontal, and said first and second split regions are adjacent vertically with one another inside said frame.

6. A manual focus device as defined in claim 5, wherein said first and second split regions are disposed substantially at a center of said display panel.

7. A manual focus device as defined in claim 1, wherein said display panel is an electronic viewfinder for observing said object.

8. A manual focus device as defined in claim 1, wherein said display panel is disposed on a rear of said camera.

9. A manual focus device as defined in claim 1, further comprising a defocus determiner for detecting a phase difference between said first and second sample pickup data, so as to obtain defocus information representing an amount of a deviation of said focusing lens from said in-focus position.

10. A manual focus device as defined in claim 9, further comprising:

an amount detector for detecting an operation shifting amount of a focusing ring mechanism for moving said focusing lens;

an image outputting circuit for changing positions of said first and second sample images on said display panel according to said operation shifting amount, so as to cause said first and second sample images to coincide with one another when said operation shifting amount comes up to a level according to said defocus information.

11. A manual focus device as defined in claim 1, further comprising a gain controller for amplifying said pickup data in consideration of a predetermined brightness level.

12. A manual focus device as defined in claim 11, further comprising an adder for adding up said pickup data of N adjacent pixels to obtain pixel mixing pickup data, for image reduction at a ratio of 1/N.

13. A manual focus device as defined in claim 12, further comprising a mode switch for setting a high contrast mode upon being tuned on;

wherein said adder is operated upon setting said high contrast mode, to obtain said pixel mixing pickup data.

14. A manual focus device as defined in claim 1, wherein when said aperture stop shifting mechanism is set at said first and second light amount gravity centers, said opening size of said aperture stop unit is smaller than an opening size in a fully open state thereof.

15. An autofocus camera comprising:

a taking lens system, including a focusing lens movable on a lens optical axis, for being set in an in-focus position according to an object distance, to condense object light from a photographic object on a focal plane;

a lens driving mechanism for moving said focusing lens on said lens optical axis;

a pickup element, disposed on said focal plane, for outputting pickup data by picking up said object;

an aperture stop unit for limiting a light amount of said object light;

an aperture stop shifting mechanism for setting said aperture stop unit at a first light amount gravity center by shifting said aperture stop unit in a first direction on a plane perpendicular to said lens optical axis, for setting said aperture stop unit at a second light amount gravity center by shifting said aperture stop unit in a second direction that is reverse to said first direction, wherein said first and second light amount gravity centers are equidistant from said lens optical axis, and wherein said pickup element outputs first and second sample pickup data by picking up said object through aperture stop unit when said aperture stop unit is set at respectively said first and second light amount gravity centers; and

a controller for obtaining said in-focus position by a process of comparison and evaluation of said first and second sample pickup data, and for actuating said lens driving mechanism in accordance therewith.

16. An autofocus camera as defined in claim 15, wherein said aperture shifting mechanism changes an opening size of said aperture stop unit by setting said aperture stop unit on said lens optical axis, to adjust said light amount for an exposure.

17. An autofocus camera as defined in claim 16, wherein said controller includes:

an image comparator for obtaining a phase difference by comparison between said first and second sample pickup data; and

a defocus determiner for obtaining defocus information representing an amount of a deviation of said focusing lens from said in-focus position according to said phase difference.

18. An autofocus camera as defined in claim 17, further comprising a gain controller for amplifying said pickup data in consideration of a predetermined brightness level, to supply said controller therewith.

19. An autofocus camera as defined in claim 18, wherein when said aperture stop shifting mechanism is set at said first and second light amount gravity centers, said opening size of said aperture stop unit is smaller than an opening size in a fully open state thereof.

20. An autofocus camera as defined in claim 18, further comprising a comparator for determining whether brightness according to said pickup data is a low brightness by comparison with threshold data;

wherein when said brightness according to said pickup data is said low brightness, said gain controller amplifies said first and second sample pickup data.

21. An autofocus camera as defined in claim 18, further comprising an adder for adding up said pickup data of N adjacent pixels to obtain pixel mixing pickup data, for image reduction at a ratio of 1/N.

22. An autofocus camera as defined in claim 21, further comprising a mode switch for setting a high contrast mode upon being tuned on;

wherein said adder is operated upon setting said high contrast mode, to obtain said pixel mixing pickup data.

23. An autofocus camera as defined in claim 17, wherein said aperture stop shifting mechanism includes:

first and second aperture stop blades, having inner curved edges opposed to each other, for defining an opening inside said inner curved edges; and

first and second blade actuators for moving said first and second aperture stop blades in said first and second directions.

24. An autofocus camera as defined in claim 23, wherein each of said first and second blade actuators includes:

a rack formed with one aperture stop blade included in said first and second aperture stop blades;

a pinion meshed with said rack; and

a motor for rotating said pinion in forward and backward directions.

25. An autofocus camera as defined in claim 24, wherein said first and second directions are horizontal.

26. An autofocus camera as defined in claim 17, further comprising:

a comparator for determining whether brightness according to said pickup data is a low brightness by comparison with threshold data;

a contrast determiner for outputting contrast information according to said pickup data;

wherein when said brightness according to said pickup data is said low brightness, said controller inhibits said aperture stop shifting mechanism from shifting toward said first and second light amount gravity centers, causes said aperture stop shifting mechanism to open fully said aperture stop unit about said lens optical axis, moves said focusing lens, and checks a change in said contrast information in moving said focusing lens, to determine said in-focus position in accordance therewith.

27. An autofocus camera as defined in claim 26, wherein said contrast information is a finite difference between maximum and minimum brightness levels of an image according to said pickup data, and when said finite difference is greatest, then said focusing lens is judged as set in said in-focus position.

28. An autofocus camera as defined in claim 17, further comprising:

a temporary memory for storing said pickup data of one frame by overwriting with said pickup data of a frame preceding to said one frame upon outputting of said pickup element;

said image comparator further compares said one and preceding frames being consecutive, and outputs time-sequential comparison information;

an image shake compensator for subjecting said pickup data to image shake compensation according to said comparison information.

29. An autofocus camera comprising:

a taking lens system, including a focusing lens movable on a lens optical axis, for being set in an in-focus position according to an object distance, to condense object light from a photographic object on a focal plane;

a lens driving mechanism for moving said focusing lens on said lens optical axis;

a pickup element, disposed on said focal plane, for outputting pickup data by picking up said object;

an aperture stop unit for limiting a light amount of said object light;

an aperture stop shifting mechanism for moving said aperture stop unit alternately in a first direction and a second direction reverse thereto on a plane perpendicular to said lens optical axis, to set said aperture stop unit cyclically between first and second light amount gravity centers, wherein said first and second light amount gravity centers are equidistant from said lens optical axis, and wherein said pickup element outputs first and second sample pickup data by picking up said object through said aperture stop unit when said aperture stop unit is set at respectively said first and second light amount gravity centers;

a first determiner for determining first image deviation information by comparison between said first and second sample pickup data;

a second determiner for determining second image deviation information by comparison between a preceding output of said first sample pickup data and a present output of said first sample pickup data; and

a controller for checking focusing of said focusing lens according to said first and second image deviation information, and for actuating said lens driving mechanism to set said focusing lens in said in-focus position.

30. An autofocus camera as defined in claim 29, wherein said controller determines disparity of view generated by movement of said aperture stop unit according to said first and second image deviation information, and said disparity of view corresponds to a defocus amount of said focusing lens from said in-focus position.